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## FURTHER NOTES ON EUPHYES DUKESI (HESPERIIDAE)

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A MINOR BUT UNFORTUNATE ERROR crept into my recent paper on Euphyes dukesi (Lindsey) (Irwin, "1969" [1971]). Mr. Gerald Straley of the Virginia Polytechnic Institute Extension Division has written me as follows: "I only know of a couple of places in Virginia where it [dukesi] is found, but one of them is along Pocaty Creek near Blackwater, in what was formerly Princess Anne County, but is now the City of Virginia Beach . . . there is no Prince Albert County, Virginia." Evidently I carelessly misinterpreted the abbreviation "P. A. Co." on the series of 7 8 8  $1 \circ dukesi$  in the Carnegie Museum collection, taken at this locality by John Bauer on June 13, 1964. It is thus apparent that this record, although not previously published, is from the same general area where the species occurs in Virginia discussed by Clark and Clark (1951) and by Mather (1963). There is also a town called Blackwater in Lee County, in extreme southwestern Virginia, but it is obviously not this which is meant. My thanks to Mr. Straley.

Although this error was regrettable, its correction provides an opportunity for the publication of additional records and field notes on *E. dukesi* which were received too late for inclusion in the original paper. These are the results of the observations made by Mr. Gayle T. Strickland of Baton Rouge, Louisiana, of the occurrence of *dukesi* in that state. Mr. Strickland has very kindly given me permission to publish his data, for which I wish to express my gratitude to him. I cannot do better than to quote him directly:

"The following specimens [of *Euphyes dukesi*] were taken near the town of Denson in Livingston Parish. The nearest post office is French Settlement, La., which is 10 air-miles west and slightly north of Denson.

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The area of the colony was small, probably less than 50 feet in diameter, and located in a shaded swamp with several inches of standing water. V-17-69, 1  $\delta$ ; V-21-69, 2  $\delta$   $\delta$ , V-31-69, 4  $\delta$   $\delta$  1  $\varphi$ ; VI-15-69, 16  $\delta$   $\delta$  4  $\varphi$   $\varphi$ . No other visits were made to this colony.

"The following specimens were taken at Baton Rouge in East Baton Rouge Parish, La., less than one mile south of the present city limits. The area of the colony was extensive, occupying ditches on either side of a railroad for more than one-half mile. Adjacent to the railroad on the west were extensive cultivated fields. Adjacent on the east, a highway and then an extended low-lying, sometimes swampy area. There was no standing water and no shade in the area. VII-16-69, 9  $\delta \delta$ ; VIII-23-69, 11  $\delta \delta 3 \varphi \varphi$ ; VIII-29-69, 1 $\delta$ ; IX-6-69, 14  $\delta \delta 8 \varphi \varphi$ ; IX-21-69, 9  $\delta \delta 4 \varphi \varphi$ ; X-26-69, 7  $\delta \delta 5 \varphi \varphi$ ; XI-2-69, 2  $\delta \delta 1 \varphi$ . At no time in either colony were specimens seen more than 15-20 feet from the foodplant (*Carex hyalinolepsis*).

"The number of specimens taken at the Denson colony is probably representative of the population density on the corresponding dates. The single  $\delta$  taken V-17-69 was freshly emerged, and not yet fully capable of flight. A careful search for several hours produced no other specimens on this date.

"No colony sites were visited in July. The Baton Rouge colony was discovered on VIII-16-69, on which date very worn as well as fresh specimens were collected. At present I suspect that flight period is continuous in time in Louisiana from early May through early November.

"The number of specimens collected at the Baton Rouge colony is not representative of population density, as I made no attempt to collect all specimens seen on the various trips. On November 2 only 5 specimens were seen of which 3 were collected. No specimens were seen on November 10."

Strickland also collected *E. dukesi* at three additional Louisiana localities during 1970: 2 mi. S Epps, West Carroll Parish, VI-4-70, 2 specimens in roadside ditch with foodplant; 8 mi. SE Slidell, St. Tammany Parish, VIII-12-70, 1  $\ddagger$  on foodplant; Schriever, Terrebonne Parish, VIII-16-70, 1  $\ddagger$  on foodplant. He also captured a fresh male at the Baton Rouge locality on July 31, 1970, thus providing a record for that month.

It will be noted that the conditions under which the skipper was found at the Baton Rouge locality were widely at variance with its generally stated habitat preference, in that there was little shade and no standing water. Strickland (*in litt.*) states that "I can assure you that my 'swamp' and 'roadside' specimens are indistinguishable. There is a great deal more variation within each colony than between colonies . . . I have seen six [*sic*] colonies [the sixth evidently unreported] in Louisiana and the only thing they have in common is the foodplant. I have yet to find the foodplant without the presence of *dukesi*." Comparison of 2 & & and 2 9 9 from the Baton Rouge (roadside) locality with a  $\delta$  from the Denson (swamp) habitat, which Strickland kindly sent me for study, supports his assertion. The locality at Harahan, Louisiana, described by Mather (1963), where W. D.



Fig. 1. Habitats of *Euphyes dukesi* in Louisiana. Above, Denson colony; below, Baton Rouge colony.

(Photographs courtesy Gayle T. Strickland)

Field encountered the species in 1944, appears from its description to have been somewhat similarly devoid of standing water, although perhaps more shaded, than the Baton Rouge habitat.

Pliske ("1957" [1958]) states that the host of E. dukesi in the Michigan locality where he studied the species is Carex lacustris. According to Jones and Fuller (1955), this sedge does not occur south of Ohio and Illinois, and is perhaps more strongly confined to true swamp environments than is the closely related and more widely ranging C. hyalinolepis, which the observations of Strickland indicate is the host utilized by dukesi in Louisiana. It therefore seems likely that the occurrence of E. dukesi in comparatively dry situations is more frequent than has previously been believed, and that the presence of standing water in its habitat is not an inherent biological requirement of dukesi, but merely a function of the differing environmental characters of its discrete hosts in various parts of its range.

The five Louisiana *dukesi* sent me by Strickland, as well as all of the four presently known Illinois specimens, have been placed in the collection of the Illinois Natural History Survey.

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